



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,547	11/07/2003	Jagnandan K. Bhangu	84704 3041 KAW	8248
20736	7590	08/23/2004	EXAMINER	
MANELLI DENISON & SELTER			TRAN, LEN	
2000 M STREET NW SUITE 700			ART UNIT	
WASHINGTON, DC 20036-3307			PAPER NUMBER	

1725

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/702,547

Applicant(s)

BHANGU ET AL.

Examiner

Len Tran

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 10-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-9, drawn to a master mold, classified in class 164, subclass 361.
  - II. Claims 10-18, drawn to a casting product, classified in class 164, subclass 246.
  - III. Claims 19-24, drawn to a method, classified in class 164, subclass 516.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product (precursor casting) can be made with an injection die casting apparatus.
3. Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the master mold can be used with countergravity casting.
4. Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be

Art Unit: 1725

used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made with injection molding process.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and III, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mr. Warren Taltavul on June 25, 2004 a provisional election was made without traverse to prosecute the invention of group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1725

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose (US 5,234,047).

As to claim 1, Rose discloses a master mold (70) in an investment molding process (col. 1, line 6), wherein the master mold having internal surface defining a space in which the casting can be formed, characterized the surface further defines a location indentation (figure 5, between #74 and #76) to provide location projection on the casting into which a holding member can be inserted to engage an internal member (col. 4, lines 36-41). In addition, a holding member does not provide a positive limitation, since applicant is claiming the master mold. Furthermore, **MPEP 2115 states**, *"Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claims" and "inclusions of material or article worked upon by a structure being claimed does not impart patentability to the claims."*

As to claim 2, the master mold is capable of forming a casting with first removable material and an internal member is formed of a removable material. In addition, the removable material does not provide a positive limitation, since applicant is claiming the master mold. Any material can be used with the apparatus disclosed by Rose. Furthermore, **MPEP 2115 states**, *"Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claims" and "inclusions of material or article worked upon by a structure being claimed does not impart patentability to the claims."*

Art Unit: 1725

As to claim 7, the indentation is generally circular (figure 5), since this casting product is a turbine blade similar to applicant's disclosure.

As to claim 8, the indentation has generally aerodynamic (figure 5), since this casting product is a turbine blade similar to applicant's disclosure.

As to claim 9, the location indentations are arranged in pairs, the respective pair being arranged generally opposite each other (figure 5).

#### ***Allowable Subject Matter***

10. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior arts of record fail to teach the location indentation has a first dimension transverse to the surface, and has a second dimension generally parallel to the surface, the first dimension being less than the second dimension.

#### ***Inquiry***

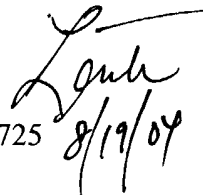
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (571) 272-1184. The examiner can normally be reached on M-F, 8:30 - 5.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Len Tran  
Examiner  
Art Unit 1725

A handwritten signature in cursive script, appearing to read 'Len Tran', is written over the printed name. Below the signature, the date '8/19/04' is handwritten in a similar cursive style.

LT  
August 19, 2004